



— Y-12 BULLETIN

A Newspaper For Y-12 Employees of Union Carbide Corporation—Nuclear Division

VOL. 21 — NO. 2

OAK RIDGE, TENNESSEE

Wednesday, January 18, 1967

Credit Union Declares 5% Dividend, Plans Annual Meet

Continuing the theme that if you owned a restaurant, you wouldn't go down the street to eat, the Y-12 Credit Union is laying big plans for its annual meeting next week. Another five per cent per annum was declared for the last six months of 1966. This interest will be automatically added to the member's savings account, the board emphasized. The annual meeting is planned for next Thursday, January 26, at 7:30 p.m. at the Jefferson Junior High School auditorium.



Julius M. Sparkman

Livingston Slated For Sigma Xi Meet

The Society of Sigma Xi, at the University of Tennessee, will feature Dr. Ralph Livingston at its meeting tomorrow, January 19, at 8 p.m. The meeting will be held in Daugherty Engineering Auditorium at UT.

Dr. Livingston has done outstanding work in the fields of quadruple spectroscopy, microwave spectroscopy, nuclear magnetic resonance and paramagnetic resonance. His research is known throughout the world and he has given many talks on his discoveries both in the United States and in many countries abroad.

"Paramagnetic Resonance Studies of Liquids during Photolysis," will be Livingston's topic.

A brief description of the paramagnetic resonance method will be given followed by a description of experiments on liquids where short lived chemical free radicals are formed during the course of irradiation with ultraviolet light. Sharp paramagnetic resonance spectra are obtained which allow the radicals to be identified and some of the physical and chemical properties elucidated.

All interested parties are invited to the lecture tomorrow night.

1966 Another Record Year Says Mason

Union Carbide's sales and earnings for 1966 are expected to set new records, Birny Mason Jr., chairman of the board, stated last week.

Sales for 1966 will be up seven or eight per cent over the \$2,064 million reported for 1965, thereby setting a new record for the eighth consecutive year. An even higher sales level might have been reached if more capacity had been available, Mason stated.

"Although final figures will not be available until later in the month, our present estimates indicate that 1966 earnings will be about \$3.85 per share, an increase of more than two per cent over 1965 and a new record for the fifth consecutive year," Mason said. "This result has been achieved despite a number of adverse factors, principal of which has been a series of strikes affecting 11 production facilities. This labor dispute began in the third quarter and is still continuing over the issue of multi-plant bargaining," he added. Mason reported that delay in the completion of new facilities has in turn required prolonged operation of older plants at uneconomically high rates and required excessive purchases of materials for resale in order to meet customer demands. Union Carbide has also noticed some upward pressure on costs generally, particularly labor costs, during the latter part of 1966. This factor has affected operating margins adversely.

In regard to the outlook for 1967, Mason said that the company's performance would of course depend upon the general level of business and the schedule on which new facilities can be brought into production, but that based upon circumstances now foreseen an increase in both sales and earnings is expected.

Only 160 Original AEC Employees Still Around

During January, the Atomic Energy Commission observed its 20th anniversary as the civilian agency that assumed responsibility for the Nation's atomic energy program in 1947 from the U.S. Army's Manhattan Engineering District. Continuing their employment here are 160 AEC employees who transferred from MED in those days.

When the atomic energy program was transferred to the new agency 20 years ago, 5,900 employees of the Manhattan project joined the AEC. Today, only 417 of those employees are still with the AEC, with the largest single group located in Oak Ridge.

Of the 160 employees still employed here, 130 are with the Oak Ridge Operations and the remaining 30 are with the Division of Technical Information Extension here.

THREATENING WORDS

Overheard in the ladies' lounge: "So I told him if he doesn't keep his alimony payments coming, I'll repossess him!"



BIRNY MASON JR., UNION CARBIDE CORPORATION BOARD CHAIRMAN and CBS News Correspondent **Walter Cronkite** (right) principal reporter for CBS-TV's "The 21st Century," discuss the potential of the synthetic ruby rod on the table before them. This device developed by Union Carbide scientists is the heart of the laser which will have wide use in twenty-first century technology. Lasers are being used today in a variety of ways, including surgery, welding and communications. "The 21st Century" will begin on the CBS Television Network Sundays, starting January 29 from 6 until 6:30 p.m., EST. (The program will be aired locally by WBIR-TV, Channel 10.)

World Of Tomorrow Theme Of New Carbide TV Program

Driven by the unprecedented challenges facing man in the years immediately ahead, government and academic, institutional and industrial communities are joined, as never before, in development of projects for man's betterment. It is this phenomenon, this pooling of resources for the "invention and not the accident" of the future, that inspired the new color television series, "The 21st Century," which premieres on the CBS Television Network Sunday, January 29, 6 until 6:30 p.m., EST. (The program will be carried locally by WBIR-TV, Channel 10.) The new series will be sponsored in the public interest by Union Carbide Corporation.

"The very nature of the program, with its exciting, scientific look to the future, makes it the logical one to sponsor," said Birny Mason Jr., Chairman of the Board of Union Carbide. "Our company, which celebrates its 50th anniversary in 1967, is deeply committed to research into the needs of the future. Our facilities in many parts of the world, along with those of other United States corporations and institutions, are delving into many of the subjects to be reported by 'The 21st Century'."

'The Discovery Company'

"Because we think of ourselves as the Discovery Company, it seems fitting that we should participate through 'The 21st Century,' in helping the public discover some of the wonders that science and industry are readying for the coming century."

Sponsorship of "The 21st Century" marks the first time Union Carbide has been the exclusive sponsor of a television series.

Among the subjects to be explored by CBS News Correspondent Walter Cronkite are genetics, in which advances have been made so rapidly as to pose

staggering moral, philosophical, and social questions; ocean engineering, which includes mining and cultivating the sea floor, as well as fish husbandry; extra-terrestrial life; transportation within the megalopolis and beyond; and communications in the space age.

UCC's Own Projects

Representative of the scope of research being performed by industry are Union Carbide's own projects which range from the development of lasers for use in surgery and communications, to maintenance of life in outer space, and from ocean engineering to superinsulation.

Some of the products from Union Carbide's laboratories have already resulted in major scientific breakthroughs. For example, the laser is being successfully used in detached retina operations and other delicate surgery. Its potential in communications and industrial uses is almost limitless. Union Carbide is a pioneer in, and the major commercial producer of laser crystals.

Looking for the day when many may have to rely on the sea as an important source for food and materials, Union Carbide is pioneering a vast program in ocean engineering. Studies also include the adaptation of land-bound

Continued on Page 4

MIT's Lidsky Guest At Thermonuclear Meet

Professor L. M. Lidsky, Massachusetts Institute of Technology, will lead this week's Thermonuclear Division seminar. His topic will be "High Power Windowless Gas Target for Use as High Intensity Neutron Source."

The seminar is set for Thursday, January 19, at 9 a.m. in the 5500 Building, ORNL.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated 45 Days Or 1,148,000 Man-Hours (Unofficial Estimate) Through January 15 Without A Disabling Injury Make Safety A Constant Companion

The Bulletin

Published Weekly For The
Y-12 Employees Of
UNION CARBIDE
CORPORATION



NUCLEAR DIVISION

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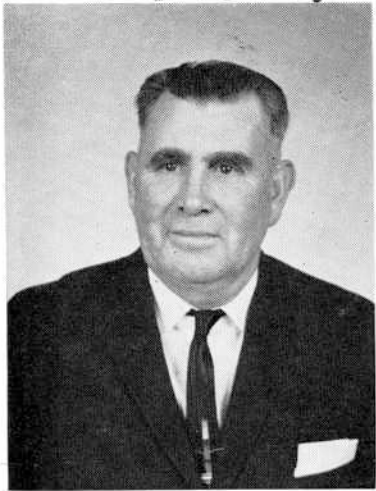
American Association Industrial Editors

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Early Retirement For James F. Brown

6-13298



James F. Brown

The Casting Department bade farewell on December 30 to James F. Brown, who retired early.

Brown came to Y-12 the second time on November 20, 1951 . . . having worked here in the early days between 1943 and 1945. He was also with the Aluminum Company of America before coming here, and had farmed at his Emory Road home.

Born in Byington, Brown lived in this area most of his life. He married the former Lena Russell . . . and they have six children . . . sons James R., Kenneth F. and Delmar F., all of Knoxville; daughters Lena Kramer and Florence Bryan, both of Knoxville, and Brenda Lee, Detroit, Michigan.

The Casting folks gathered in late December to wish co-worker Brown a pleasant retirement.

Secretarial Profession Has Been Around A While

Whether you're a boss or a boss's "right-hand gal," you may be surprised to know that the secretarial occupation is about 5,000 years old!

The earliest secretaries were Babylonian scribes who took dictation on clay tablets. Considering the muscle that must have been required for "filing" away important business documents in those days, it's not too surprising that being a secretary was considered no job for a lady.

Filing was made easier by the ancient Egyptians, who invented paper by hammering the papyrus plant into long strips. The Egyptians wrote on this material as early as the third millennium B.C., and papyrus was used in the Greco-Roman world for a thousand years.

You can get a permanent injury from a temporary repair job.



Mr. and Mrs.
Nicholas Kimbrough Smith



As January, and the new year, get a foothold in time, more Y-12ers observe important milestones with Union Carbide Corporation. Congratulations.

20 YEARS

Maurice G. Crouch, Utilities Administration, January 19.

Clarence G. Christiansen, Beta Two Shop, January 22.

Arnold R. Agee, M Wing Shop, January 23.

15 YEARS

William A. Moles, Accounting, Budgets and Scheduling, January 18.

Edwin M. Bittle, Process Maintenance, January 21.

Richard W. Hayes, Buildings, Grounds and Maintenance Shops, January 21.

Alexander Berry, General Machine Shop, January 22.

Charles O. Henderson, Dispatching Department, January 22.

Joseph L. Ailey, Chemical Services, January 23.

Howard L. Wagner, Special Services, January 23.

Ann H. Rackley, Security Department, January 24.

Many Y-12ers Will Mark UCC Anniversaries

A total of 7,835 years of service with Union Carbide Corporation will rate mention in the Bulletin this year for Y-12 employees. The goodly sum of 108 will mark 20 years service, 270 will observe 15-year anniversaries, and 110 will mark 10 years with Union Carbide.

One employee will join the Old-Timers ranks and pass the 25-year mark in '67.

Like the man says, we're all getting a little older!

IRS 'Self-Help' Tips Coming Soon In Bulletin

Coming soon in the Bulletin. The Internal Revenue Service has published a list of "Do's and Don'ts" in filing your income tax reports. The comprehensive instructions will be included in an issue of the Bulletin soon.



SMITH—WILKINSON

Holiday motifs accentuated the wedding of Miss Adrienne Wilkinson and Mr. Nicholas Kimbrough Smith. The wedding took place Thursday, December 22, at 7 p.m. at Kern Memorial Methodist Church, Oak Ridge, with the Reverend George Naff officiating.

The bride is the daughter of Mr. and Mrs. Paul E. Wilkinson, 37 Outer Drive. (He is in Y-12's Engineering Division.) Mr. Smith is the son of Mrs. Elizabeth Nicholas Smith, Oak Ridge, and Dr. N. M. Smith, Woodbridge, Virginia.

Given in marriage by her father, the bride wore a gown of candlelight peau'd'ange lace cage sweeping into a full chapel train over a sheath underdress of silk faced peau. Her shoulder length veil of English silk illusion was held by a matching orange blossom crown, and she carried a bouquet of gardenias and stephanotis.

Maid of honor was Miss Karen Hewitt, Waynesboro, Virginia. Other attendants were Miss Claudia Owens, Paducah, Kentucky; Mrs. Charles Trotman Jr., Oak Ridge; Miss Wendy Wilkinson, and Shelagh Smith, both of Oak Ridge. They wore Christmas colors of red and green velvet, and carried white fur muffs adorned with holly.

Mr. Robert L. Emmert served as the groom's best man.

Mrs. Smith is a graduate of Oak Ridge High School, and Virginia Intermont. She attended the University of Tennessee and plans to continue her education at Auburn University.

The groom is a senior at Auburn University, where he has served in the Auburn Marching Band, and is a member of Delta Sigma Phi fraternity.

A reception honored the couple after their marriage at the Alexander Motor Inn, Oak Ridge. Assisting at the reception were Miss Janie Whitcomb, Mrs. Dale Skidmore, Mrs. Joe Anderson, Misses Carolyn Wolff and Mary Helen Gray.

The couple is residing in Auburn, Alabama.



Ride wanted from Emory Road at Hackworth Road, Karns, to Central Portal, straight day. B. L. Fritts, plant phone 3-7009, home phone Knoxville 588-6175.

Will join car pool from Zirkle Hills, Kingston, to North or Central Portals, straight day. N. E. Dunwoody, plant phone 3-7220, home phone Kingston 376-9331.

Ride wanted from Mitchell Street, Cherry Street vicinity, Knoxville, to North Portal, straight day. James I McKinley, plant phone 3-5007, home phone Knoxville 522-8252.

Ride wanted from Wright Road, Karns, to Central Portal, straight day. Flo Simpson, plant phone 3-5063, home phone Knoxville 584-1863.

Three riders wanted from Lenoir City, to all Portals, straight day. G. W. Smith, plant phone 3-5981, home phone Lenoir City 986-7806.

Will join car pool from North Purdue, Oak Ridge, to Central



THE AMERICAN RED CROSS is now headquarters for the latest club in town . . . the Servicemen's Wives and Mothers Club. Seen above are Mrs. Roy E. Worrell, Mrs. Johnnie Blanton, Mrs. Ernest Edwards and Mrs. N. H. Campbell. The group has already completed a project of sending gift packages to the veterans at Mountain Home for Christmas.

Servicemen's Wives, Mothers Club Started At Red Cross Office

Do you have a husband . . . or a son in service? The local American Red Cross is encouraging a new organization . . . "Servicemen's Wives and Mothers Club." The group is laying plans to do some service projects, as well as boost morale within their own ranks.

The first job attempted by the group, already finished, was to help the local Red Cross chapter gather and send gifts to the vet-

erans at Mountain Home for Christmas.

Anyone interested in joining this organization should contact the American Red Cross office on the turnpike for further information . . . extension 583-5641. Or you may call Mrs. Ernest Edwards, telephone 483-9818, or Mrs. N. H. Campbell, 483-1169. (Both husbands are employed in Y-12 . . . Edwards in Area Five Maintenance; Campbell in ORNL Chemical Services.)



Libby Orange
Miss Merry Christmas

Libby Orange Is Pageant Queen

Oliver Springs High School highlighted the recent holidays by crowning a Miss Merry Christmas 1966. Taking the competition over 19 other girls was Libby Orange, daughter of Mr. and Mrs. Harley Orange, Route 2, Oliver Springs. Orange is in Y-12's General Shop Job Liaison.

Sponsored by Norris Creamery in the competition, Libby is an active junior at OSHS. She is a majorette and cheerleader there.

The Oranges' other children include Harley Jr., in Atlanta; Mrs. Becky Hill, in Italy; and Kathy, a sophomore at OSHS, and Danny in grammar school there.

English Drama Is Playhouse Offering

"A Man For All Seasons" opens Friday, January 20, as the Oak Ridge Playhouse presents the excellent and moving drama which tells of the conflict between Sir Thomas More and Henry VIII . . . how More stood up to the demands of the king, and was convicted of treason on false evidence and beheaded.

"A Man" has been filmed and the new motion picture is receiving rave reviews. The drama has been called "luminous," "exhilarating," and "superb." It will play this weekend, Friday and Saturday, January 20 and 21 . . . and again Thursday, Friday, Saturday and Sunday, January 26, 27, 28 and 29. The play was written by Robert Bolt who also wrote the screenplays for "Lawrence of Arabia" and "Doctor Zhivago."

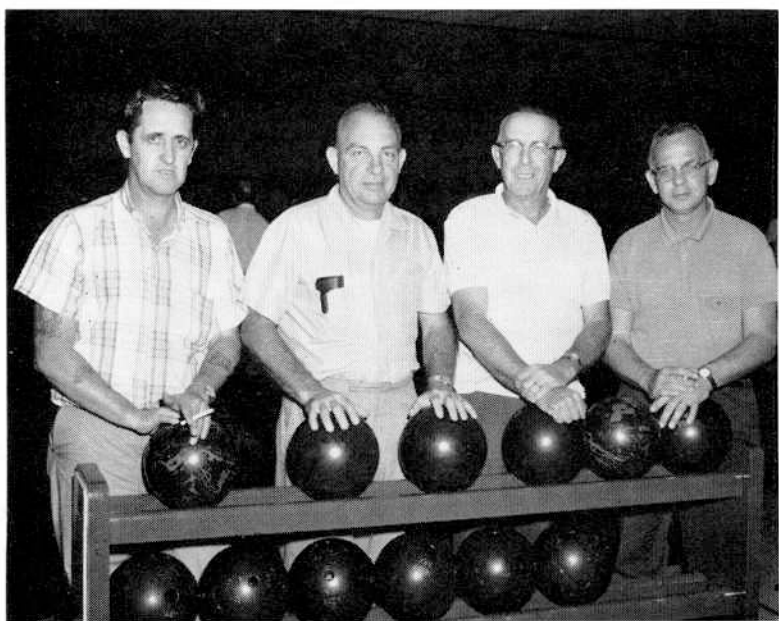
Reservations for "A Man" may be made by telephoning Oak Ridge 483-1224.

Portal, straight day. J. C. Mooney, plant phone 3-5938, home phone Oak Ridge 483-3386.

One car pool member wanted from Rocky Hill vicinity, Knoxville, to any portal, straight day. J. K. Cox, plant phone 3-5281, home phone Knoxville 588-0143.

SIGN OF AGE

A woman is getting on in years when she begins to worry more about how her shoes fit than her sweater.



A HIGH-FLYING TEAM IN THE CLASSIC Bowling League is the Eagles . . . seen above . . . one shy of the necessary five to man the alleys. They are from left Captain W. C. Smith, Walter Sherrod, Ed Sise and R. L. Habermas.

Basketball Nears Half Season End

The VIP's, still kings in the league, opened basketball play last week by trouncing the Y-12 Braves, 76 to 39 . . . with three hoopsters getting into the double figure scoring . . . Nathan Stonecipher tallied 23, Larry Finch, 22, and Big Jim Carter scored 10.

For the losing Braves it was Tim Butler, 14; Ray Riggs, 10; and Bob Birdwhistle, nine.

The ORNL Radioisotopes edged out the Celtics, K-25, in game number two last week to the tune of 39 to 29. Sam Ewing and Junior Hood scored eight points each for the winning squad. Richard Odom sank nine for the losing team.

Ecobums Win Again

Monday's final action pitted the Ecobums against the B bar R's . . . the Bums winning 48 to 34. Jim Reed came through with 15 for the winners, Ernie Neal, 13. Jerry Batson scored 15 for the losing combo.

The Ecobums turned on the steam late in the game Wednesday to down the Y-12 Bombers, 55 to 41. With only three and one-half minutes remaining the score was 44 to 41, but the Bums turned on the steam and left the Bombers standing still. Ernie Neal led the chargers with 17 big points and very good support from the rest of the team.

Jim Shoemaker and Herman Thomas led scoring on the losing team . . . Shoe with 11; Herm with 12.

Has Beens Edge Celtics

The ORNL Has Beens edged by the Celtics, K-25, 59 to 50 in more action Wednesday. The Celtics were almost chased from the gym the first half, but rallied and came back in the second half . . . but the edge was too great. Bobby McCulley led scoring for the winners with 15; Churchill Moore led the losers with 17.

The final game of the night pitted two Y-12 teams, as the Braves scalped the Bat Boys 59 to 39. The Bat Boys proved game, but the finesse was too much. Jim Milligan led the victors with 17 points; Jim Batch took 14. For the losers it was Romeo Greene with nine.

League standings follow:

Team	W	L
VIP's, ORNL	6	0
Radioisotopes, ORNL	5	2
Bombers, ORNL	4	2
Has Beens, ORNL	4	2
Ecobums, ORNL	4	3
Celtics, K-25	3	4
B bar R's, ORNL	2	5
Braves, Y-12	2	5
Bat Boys, Y-12	0	6

Playboys' Perfect Play Highlights Classic Bowling

The Playboys continue their perfect playing in the Classic Bowling League. They smeared the All Stars last week for the big four points. Other sweeps went to the Swingsters past the Rebels, the Wasps over the Eightballs, and the Screwballs superior to the Smelters.

Three points were gained as the Has Beens had the Bumpers, the Cubs curbed the Rippers, and the Tigers took the Markers. The Eagles and Splinters split two each.

Bill Stephens, Bumpers, bested the field in singles rolling, posting a 233 scratch, 263 handicap game. C. R. Lively, Swingsters, swung in with a 574 scratch series; and R. D. Smith, Tigers, took a 650 handicap series.

Team honors were split four ways: The Bumpers best on singles with 800 scratch, the Tigers with 1923 handicap. In series counting it was the Swingsters with 2510 scratch, the Playboys with 2905 handicap total.

League standings follow:

Team	W	L
Playboys	12	0
Has Beens	10	2
Cubs	9	3
Markers	7½	4½
Swingsters	7½	4½
Wasps	7	5
Screwballs	7	5
Bumpers	6	6
Eagles	6	6
Rebels	4½	7½
Tigers	4½	7½
All Stars	4	8
Rippers	4	8
Splinters	4	8
Smelters	2	10
Eightballs	1	11

Fireballs Begin C Action With Fire

The Fireballs emerged as the only St. George's of the week, as the C Bowling League began its second half. The Fireballs won the only big sweep of the day, taking the Parbusters. Three point wins went to the Strikers over the Sunflowers and the Invalids around the HiLifers.

Splitting two were the remaining teams in the league . . . the Big Five and Badgers; the Rollmasters and Royal Flush; the Rodders and Rounders.

Curt Ridings, Big Five, swept individual honors all the way with singles of 231 scratch, 259 handicap . . . series of 594 and 678.

The Big Five and Fireballs split singles honors . . . the Five rolling scratch high of 908, while the Fireballs posted a 1034 handicap

Alley Tournament Set In February

Most Y-12 bowlers are already aware of the big tournament, set for the weekend of February 25, 26. (Eligible bowlers are those bowling in a "sanctioned" league who have at least 21 games under their belts between August 1, 1966 and February 2, 1967. For those bowlers who have less than these numbers, last year's (1966) average must be used.)

All teams and mixed doubles will roll Saturday, February 25. Doubles and singles will go the next day, Sunday, February 26.

Alleymen have until Thursday, February 2, to roll their needed 21 games. You subs who have under the required amount may still add to your eligibility count.

Trophies To Be Awarded

All cash prizes will be awarded on a handicap basis. Trophies will be awarded to first place winners in the scratch, handicap and all events. Scratch all events winner will be considered the Y-12 bowling champ, both for men and women.

Entries will close at 4:30, Tuesday, February 14. Entry forms are already in the hands of league secretaries. (You do not have to bowl in a Y-12 League to be eligible . . . just as long as you are rolling in an ABC or WIBC sanctioned league.) The Recreation Department has additional entries . . . Building 9704-2, or extension 3-7109.

The fees for rolling in the Y-12 tournament will be \$2.50 per person per event, and will be distributed \$1 for prize money, \$1.50 for bowling fee. The entire prize fee will be returned to bowlers in prizes. The all events fee is 50 cents per person.

Entry Requirements

Entry blanks must be completed showing all data requested and must be submitted through the respective league secretaries. ABC and WIBC membership numbers must be entered at the top of the entry blank. Bowling men and women, not participating in Y-12 leagues, must bring certification of their league averages with their entry forms.

The tournament directors are R. T. Cantrell, secretary; J. W. Halsey and R. A. Huber, C League; John H. Boyd and Roy Roberts, Classic League; and Jim Young and Virginia Newby, Mixed League.

Copies of rules governing the tournament are available at the Recreation Office. Maximum participation by plant bowlers is again expected. There will be no All-Carbine Tournament waged this year.

Polaris Subs Require A Heap Of Our Steel!

The 41 Polaris submarines built for the U.S. Navy contain over 200,000 tons of steel — enough to build a solid line of automobiles that would extend from Washington, D.C. to Boston, Massachusetts.

single count. The Five were high also in series . . . 2633 scratch, 3006 handicap (edging by the Fireballs by one pin!).

League standings follow:

Team	W	L
Fireballs	4	0
Strikers	3	1
Invalids	3	1
Big Five	2	2
Badgers	2	2
Rollmasters	2	2
Royal Flush	2	2
Rodders	2	2
Rounders	2	2
Sunflowers	1	3
HiLifers	1	3
Parbusters	0	4



C. E. PHILLIPS, ELECTRICAL, is mighty proud of his beautiful English Coon Hound, seen above with trophies she took at a wild coon hunt recently at Cookeville. With Phillips, admiring the hound, is his son Timmy.

Recreation



calendar

Monday, January 23

BOWLING: 5:45 p.m., Ark Lanes, C League.

BASKETBALL: Beginning 6:30 p.m., Oak Ridge High School. Ecobums vs VIP's; Braves vs Radioisotopes; Bombers vs. Has Beens.

TABLE TENNIS: 7 p.m., Wildcats' Den.

Tuesday, January 24

PHYSICAL FITNESS: 7 p.m., Oak Ridge High School Gymnasium. (Women's PT held in Girls' Gym.)

Wednesday, January 25

BASKETBALL: Beginning 6:30 p.m., Jefferson Junior High School. Braves vs. Has Beens; Celtics vs. B bar R's; Bat Boys vs. Radioisotopes.

BOWLING: 8 p.m., Mixed League, Ark Lanes.

Thursday, January 26

BOWLING: 5:45 p.m., Classic League, Ark Lanes.

VOLLEYBALL: Beginning 6:30 p.m., Robertsville Junior High Gym. Court A: Set-Ups vs. Charley Brown's; Eagles vs. Old Men; Neophytes vs. K-25 Sports. Court B: Tigers vs. Mix-Ups; Beagles vs. Beavers; Ecobums vs. Scrubs.

BADMINTON: 7:30 p.m., Jefferson Junior High School Gymnasium.

Alley Cats Take Slim Mixed Lead

The Alley Cats took a slim lead in the early days of the Mixed Bowling League's second half, by downing the Novices for the full count. Taking three points were the Hits & Misses over the Roses 'N Thorns and the Goofers past the Rollers. The Mustangs moved up by twisting four points away from the Twisters.

Bob Hagood, Goofers, rollicked through all honors with singles of 211 scratch, 240 handicap; series of 541, 628. Donna Ferguson, Twisters, took female highs, with singles of 170 scratch, 225 handicap . . . series of 442 and 607.

The Goofers gained highs in singles, 645 scratch, 808, and shared series highs with the Mustangs . . . the Mustangs taking

Welfare, Brundage Patton Top Skeets

The January 8th firings in the Skeet Tournament brought Fred Welfare, ORNL, to the forefront with a 49.407 handicap score. He was followed by Bill Brundage, also of X-10, with a 48.723. Y-12's F. Patton scored a 48.708.

The next practice shoot is set for Sunday, January 27, with the next competition on February 5. Firings are held at 1 p.m. on Sundays, at the Oak Ridge Sportsman's Association. All Carbiders are invited to participate.

New shooters can start at any time since each tournament is a separate contest.

Further information may be obtained from Charlie Asmanes, extension 3-7339; or Fred Welfare, 3-5962.

January Skeet Shooting:

Firer	H'Cap Score
R. A. Allstun, Y-12	47.689
K. Bahler, K-25	47.877
D. Fry, X-10	45.840
F. McLean, X-10	46.160
J. Case, Y-12	48.585
H. Prewett, Y-12	48.991*
F. Welfare, X-10	49.407
H. Wills, X-10	48.055
C. Asmanes, Y-12	48.400
W. Brundage, X-10	48.723
F. S. Patton, Y-12	48.708
W. Davy, K-25	48.338
C. Brewster, Y-12	47.440

*Previous Winner.

Sportsmen Contribute Millions To Economy

More than 18 million hunters and target shooters spend more than \$1.5 billion annually on their hobby, the National Shooting Sports Foundation, Inc., reports. Of this amount nearly \$100 million goes to government; \$72.7 million for licenses, permits and tags; \$19 million in federal excise taxes on guns and ammunition and \$3.5 million for duck stamps. Other items include \$100 million for food; \$30 million for lodging; \$209 million for guns and ammunition; \$268 million for clothing and \$42 million for boots.

tangs . . . the Mustangs taking scratch high 1869; and the Goofers 2304 handicap.

League standings follow:

Team	W	L
Alley Cats	7	1
Hits & Misses	6	2
Goofers	6	2
Mustangs	5	3
Twisters	4	4
Roses 'N Thorns	2	6
Rollers	2	6
Novices	0	8



UNION CARBIDE CORPORATION
NUCLEAR DIVISION
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New Carbide TV Program

Continued from Page 1
plants to the sea environment. Mining beneath the ocean floor is also being advanced.

Study Of Marine Life

Specially developed diving apparatus and breathing mixtures are enabling men to move freely at greater depths and for longer periods than believed possible a few years ago. Fishlife is being studied with such an exotic concept as fish husbandry in mind.

One of the long-range problems facing the world is the dwindling quantity of fresh water. Through an economical method for desalting sea water, the vast, barren desert areas of the world could be made to bloom and produce — bringing about a dramatic improvement in the way of life of people in water-poor countries. Union Carbide is actively working on this basic problem in studies ranging from the design of large-scale nuclear desalination plants to more efficient methods to evaporate salt water and convert it to fresh water.

The twenty-first century will most surely find men in residence, temporary or otherwise, on one or more planets other than our own. In anticipation of that day, Dr. Sanford Siegel of Union Carbide's Mars Garden experiment has been successful in simulating the atmosphere of Mars and sustaining animal and plant life in this environment for relatively long periods of time. The connotations of this experiment in the upcoming Age of Space Exploration are significant to the here and now, as well as the twenty-first century.

Living Standard Does Inch Upward

Our standard of living is up 24 per cent in the past decade, despite rising prices. Confronted by a higher price tag almost everywhere she shops, particularly in the food stores, the U.S. housewife — and her husband — must wonder if higher prices are whittling away their standard of living. The answer is no — not by a long shot. Consumer prices have been on a long, steady climb — and experienced a sharp upward surge early last year — but Americans today enjoy a standard of living substantially higher than ever before in their lives. What makes this possible is the fact that wages and other personal income have risen more steadily and more rapidly than prices and taxes. Americans, despite a rising cost of living and the heavy burden of high taxes, have 24 per cent more money to spend today than they had 10 years ago. Can this economic upsurge continue? No one can predict the future, of course, but if present trends continue, things look very bright for the American wage earner.

Atom Was Competitive With Coal In Past Year

1966 will probably be remembered as the year in which the atom became economically competitive with fossil fuel in many parts of the United States and, possibly, throughout the world. This was demonstrated most forcefully with the announcement of the selection of nuclear power by the Tennessee Valley Authority for a plant in the southeastern United States, which is near a location of major coal fields.

Noted UFO Expert Is Speaker For Metals Society January 25

The Oak Ridge Chapter of the American Society for Metals features an exciting meeting, of interest to all, next week. The subject of the meeting will be "Unidentified Flying Objects—Fact or Fiction," a topic which has received much discussion in recent months, and one in which the public often hears only "part of the story."



Major Donald E. Keyhoe

The speaker for this interesting meeting will be a noted authority on UFOs, Major Donald E. Keyhoe, USMC (Ret.). Major Keyhoe at present is director of the National Investigations Committee on Aerial Phenomena, a non-profit organization that investigates world-wide reports of unidentified flying objects. The lecturer is a professional speaker and has written numerous articles on aviation, espionage, and UFO's. He has contributed to the National Geographic, Saturday Evening Post, Cosmopolitan, Redbook, True, This Week, the American Weekly, and other magazines. He is the author of Flying with Lindbergh; M-Day — What Your Government Plans for You; Flying Saucers are Real; Flying Saucers from Outer Space; The Flying Saucer Conspiracy; and Flying Saucers: Top Secret.

The NICAP, which Major Keyhoe directs, is a non-profit organization covering all 50 states and 30 foreign countries. Through its scientific and technical consultants, in the U.S. and abroad, the organization investigates world-wide reports of UFOs, evaluates all verified sightings, and reports its findings to members (currently about 10,000), to Congress and to the press.

The meeting is set by the ASM next Wednesday, January 25, at the Oak Ridge Country Club. Cost of the entire evening will be approximately \$4 which will include a social hour, a buffet dinner, and the technical meeting. (ASM members will pay \$3.25 for the program.)

Those interested in attending should contact W. R. Martin, Oak Ridge National Laboratory, extension 3-1675.

Using the best documented evidence on record, Major Keyhoe has lectured extensively on UFOs and has also broadcast several hundred TV and radio programs on unidentified flying objects.

moved. The undertaking is being jointly financed by the city's Sanitary Board, by the Federal Water Pollution Control Administration, and by Union Carbide. The corporation's share will be more than half of the \$1,776,000 cost of the project. The additional facilities will be erected on a 3.8 acre plot donated to the city by Union Carbide.

MUSIC A LA GO-GO

At one night club, the music was so bad that when a waiter dropped a tray of dishes, everybody got up and danced.

Beavers' Volleyball Record Still Clean

The Y-12 Beavers continuing their stranglehold on the Volleyball League, last week, took four games from the Mix-Ups, 15-3, 15-1, 15-3, and 15-12.

Other action saw the Old Men take two from the Ecobums 15-8 and 15-10, while the Bums won two 16-14, 18-16. The Scrubs won four from the Charley Browns 15-7, 15-0, 15-4 and 15-11.

On Court B the K-25 Sports cleaned the Beagles 15-6, 16-6, 15-2 and 15-7. The Set-Ups took four games from the Neophytes by forfeit. The Tigers tore two away from the Eagles 15-6, 15-3 . . . while the Eagles won numbers two and three 15-13 and 15-9.

League standings follow:

Team	W	L
Beavers, Y-12	16	0
K-25 Sports	15	1
Set-Ups, ORNL	14	2
Scrubs, ORNL	11	5
Old Men, ORNL	9	7
Ecobums, ORNL	9	7
Beagles, ORNL	6	10
Tiegers, ORNL	6	10
Charley Browns, ORNL	5	11
Eagles, Y-12	2	14
Mix-Ups, K-25	1	15
Neophytes, Y-12	0	16

Charleston, Corporation Expand Treatment Plant

Union Carbide and the city of South Charleston have announced plans to expand the joint waste treatment plant there. The existing plant, which treats industrial wastes from the corporation plant there as well as community sewage, now removes more than 40 per cent of the pollutants pumped to it. When the expansion is completed, more than 83 per cent of the pollutants will be re-



POOR HEALTH HAS FORCED one of Y-12's best liked employees to retire to his 108 East Geneva Lane, Oak Ridge, home. Gentry Underwood, formerly of Engineering, is seen at right with the handsome color television co-workers gave him on his departure. From left, are Jack Terrell, Jack Case, Leo Hemphill and Underwood.

Technical Services Plan Valentine Dinner-Dance

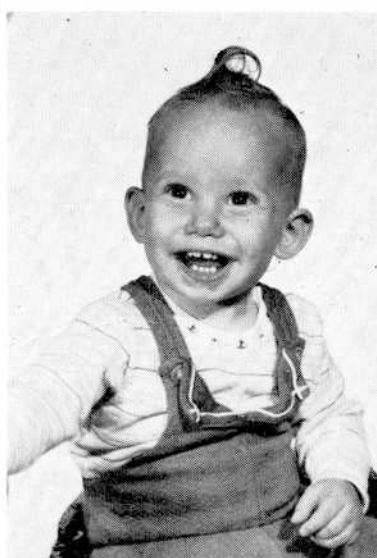
Technical Services Division is planning a big Valentine dinner-dance . . . a little late this year. Set for Saturday, February 18, at the Oak Terrace, the dance will feature music by the "Senators."

Cost will be only \$5 a couple . . . for the dance only . . . more if you plan to attend the smorgasbord dinner.

Daisy Ward and Jack McLendon, chairmen for the party, are assigning ticket-sellers throughout the division. There will be door prizes, as usual.

Female Drivers Gain On Hapless Male Ones

Since 1952, the number of female motorists has doubled to 38 million, while the increase for males was only 23 per cent (to 58 million). By 1970, estimates say, the American motoring public will be equally divided: for every man behind a wheel, there will also be a woman behind the wheel.



TWO GRANDPAS in Y-12 give this youngster reason enough to live in Atlanta . . . miles away, where neither can spoil him too much. He is Ernest Henry Taylor III, age one, the son of Mr. and Mrs. E. H. Taylor Jr. Besides the elder Taylor grandpop, little Ernie boasts Virgil Lee Perry as his maternal grandfather. Taylor is in Y-12's Assembly Operations, Perry in Area Five Maintenance.

AEC Produces 3 New Films On Atom

Three new motion pictures on atomic energy are now available for loan to the public through the Atomic Energy Commission here.

The three 16mm films are "The Atom and Eve," 15 minutes in color; "The Mass of Atoms," 47 minutes in black and white; and "Atoms on the Move: Transportation of Radioactive Materials," 24 minutes in color.

"The Atom and Eve" explains in simple terms how nuclear power has come of age, and what 11 New England utility companies are doing to use nuclear power effectively. Animation shows how nuclear power is generated and how care is being taken in the planning and construction of the plant to assure health and safety.

"The Mass of Atoms," divided in two parts of 20 and 27 minutes, respectively, shows a step-by-step experiment by scientists to determine the masses of a helium atom and a polonium atom. The film is especially useful for students in junior and senior high school physical sciences courses and up to and including introductory college physics.

"Atoms on the Move: Transportation of Radioactive Materials" is a nontechnical film which surveys the various means of transporting radioactive materials and the safety aspects underlying their packaging and handling.

The films may be borrowed free of charge by contacting the Motion Picture Film Library, US AEC, Oak Ridge, Tennessee.

F. K. McGowan Speaks At Physics Seminar

F. K. McGowan, Physics Division, will conduct this week's seminar. His subject will be "Coulomb Excitation of Nuclei of the Transition Region from Spheroidal to Spherical Shapes."

The seminar is set for Friday, January 20, at 3:15 p.m. in the Central Auditorium of ORNL's 4500N building.

TODAY'S PARADOX

Just about the time they develop an airplane that will take us almost any place in the world overnight, they come out with a color television where you can see anything in the world without ever leaving the house!